

5 Year Review of Incidence and Complications of Subclinical Infection in Intervertebral Discs Following Discectomy

Matthew Chan

Musgrove Park Hospital United Kingdom

Subclinical infection in intervertebral discs has been hypothesized as a cause back pain for several years. *Cutibacterium acnes* is the most commonly linked causative bacteria. Inflammation from the infected discs is thought to be the main pathogenesis and antibiotics have been used in an attempt to treat this infection.

Aims: The aim of this study is to identify the incidence and complications of subclinical infection in intervertebral discs following discectomy.

Methods: Disc samples following discectomy were obtained over a five-year period at a single spinal surgery centre. All samples were sent for microbiology assessment and extended 14-day culture. The results of the cultures including the specific organisms grown were recorded. The electronic records of all positive cultures were reviewed and any complications such as infection or recurrence of symptoms were noted. In addition Health Sciences with full scholarship from Ministry of Education, Nepal. Now he is a Pathology Officer at Pokhara Academy of Health Sciences, Western Regional Hospital Nepal. He has also published two books from Samikshya Publication. Modic changes were identified by reviewing pre-operative MRI scans and correlated against culture results.

Results:

154 cultures samples were reviewed. Positive cultures were identified in 40%(62) of cases. *Cutibacterium acnes* was the commonest organism, present in 58%(36) of these positive cultures. Modic endplate changes were more common in positive cultures but there was no significant difference found in complications between the two groups.

Conclusion:

Bacterial colonization of intervertebral discs is a common finding. However, it is difficult to ascertain if this is a primary infection or a contaminant. The nature of these organisms can lead to infections that can present late or chronically. Consideration for the use of topical benzoyl peroxide may help reduce these infections.



Biography:

Matthew Chan is a Trauma & Orthopaedic specialist trainee from the UK. He completed his primary medical degree in 2013, from St George's University of London. His Basic surgical training was completed in the Oswestry rotation and he started higher surgical training in 2017, on the Bristol rotation. He has a keen interest in spinal surgery and surgical infection

Speaker Biography:

Matthew Chan is a Trauma & Orthopaedic specialist trainee from the UK. He completed his primary medical degree in 2013, from St George's University of London. His Basic surgical training was completed in the Oswestry rotation and he started higher surgical training in 2017, on the Bristol rotation. He has a keen interest in spinal surgery and surgical infection

Speaker Publications:

Grainger, D.J.; Metcalfe, J.C. Tamoxifen: Teaching an old drug new tricks? Nat. Med. 1996, 4, 381–385.

[CrossRef] [PubMed]

2. Jordan, V.C. The science of selective estrogen receptor modulators: Concept to clinical practice. Clin. Cancer

Res. 2006, 12, 5010–5013. [CrossRef] [PubMed]

3. Shagufta; Ahmad, I. Tamoxifen a pioneering drug: An update on the therapeutic potential of tamoxifen

derivatives. Eur. J. Med. Chem. 2018, 143, 515–531. [CrossRef] [PubMed]

4. Heery, M.; Corbett, P.; Zelkowitz, R. Precautions for patients taking tamoxifen. J. Adv. Pract. Oncol. 2018, 9,

78–83. [PubMed]

5. Allred, D.C.; Anderson, S.J.; Paik, S.; Wickerham, D.L.; Nagtegaal, I.D.; Swain, S.M.; Mamounas, E.P.;

Julian, T.B.; Geyer, C.E., Jr.; Costantino, J.P.; et al. Adjuvant tamoxifen reduces subsequent breast cancer in

women with estrogen receptor-positive ductal carcinoma in situ: a study based on NSABP protocol B-24. J.

Clin. Oncol. 2012, 30, 1268–1273. [CrossRef] [PubMed]

[4th International Conference on Medical & Clinical Microbiology](#) June 09-10, 2020

Abstract Citation:

5 Year Review of Incidence and Complications of Subclinical Infection in Intervertebral Discs Following Discectomy 4th International Conference on Medical & Clinical Microbiology June 09-10, 2020

Introduction:

Subclinical infection in intervertebral discs has been hypothesized as a cause of back pain for several years. *Cutibacterium acnes* is the most commonly linked causative bacteria. Inflammation from the infected discs is thought to be the main pathogenesis and antibiotics have been used in an attempt to treat this infection.

Aims:

The aim of this study is to identify the incidence and complications of subclinical infection in intervertebral discs following discectomy.

Methods:

Disc samples following discectomy were obtained over a five-year period at a single spinal surgery centre. All samples were sent for microbiology assessment and extended 14-day culture. The results of the cultures including the specific organisms grown were recorded. The electronic records of all positive cultures were reviewed and any complications such as infection or recurrence of symptoms were noted. In addition, Modic changes were identified by reviewing pre-operative MRI scans and correlated against culture results.

Results:

154 cultures samples were reviewed. Positive cultures were identified in 40%(62) of cases. *Cutibacterium acnes* was the commonest organism, present in 58%(36) of these positive cultures. Modic endplate changes were more common in positive cultures but there was no significant difference found in complications between the two groups.

Conclusion:

Bacterial colonization of intervertebral discs is common finding. However, it is difficult to ascertain if this is a primary infection or a contaminant. The nature of these organisms can lead to infections that can present late or chronically. Consideration for the use of